

ADVANCE REPORT:
CALIFORNIA VITAL STATISTICS
1998

BIRTHS

DEATHS

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1998**

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HIGHLIGHTS

California and United States Comparisons

For the year 1998:

- California's estimated population was 33,494,000, an increase of 1.6 percent (537,000 persons) over the state's 1997 population. California's population comprised 12.4 percent of the United States population, or roughly one of every eight residents.
- California's 521,265 live births represented 13.2 percent of the preliminary count of all live births in the U.S., or roughly one of every eight births. California's birth rate (15.6) continued to exceed the preliminary U.S. birth rate (14.6).
- California's 225,450 deaths comprised 9.6 percent of the preliminary count of all deaths in the U.S., or roughly one of every ten deaths. California's death rate (6.7) continued to fall below the preliminary U.S. death rate (8.7).
- California's infant death rate of 5.7 per 1,000 live births was lower than the preliminary rate for the United States (7.2).

California's Births

- The number of live births to California residents decreased for the eighth consecutive year, dropping from 524,174 in 1997 to 521,265 in 1998 (-0.6 percent).
- California's birth rate in 1998 was 15.6 births per 1,000 population, a decrease of 1.9 percent from the 1997 birth rate of 15.9.
- California's birth rate decreased in 1998 compared to 1997 for mothers ages under 15-24 and increased for mothers ages 25-44.
- In 1998, Hispanics had the largest number (247,796) and percentage (47.5 percent) of births among California's race/ethnic groups.

California's Deaths

- The number of deaths to California residents increased 0.9 percent from 223,438 in 1997 to 225,450 in 1998.
- California's death rate in 1998 (6.7 deaths per 1,000 population) decreased by 1.5 percent from the 1997 rate.
- The three most prevalent causes of death were heart disease, malignant neoplasms, and cerebrovascular disease, which together accounted for 60.6 percent of all deaths in California in 1998.
- Death rates decreased in 1998 for seven of the ten leading causes of death and increased for three. The largest percentage decrease in the death rate was in homicides, which decreased by 19.0 percent. The largest percentage increase was in pneumonia and influenza (6.7 percent).
- In 1998, California's death rates were lower for females than for males in all age groups. Death rates for California's females decreased between 1997 and 1998 in all age groups with the exception of the age group of 5-14. For California's males, death rates went down in all age groups.

California's Infant Deaths

- There were 2,994 California infants under the age of one year who died in 1998, a decrease of 97 infant deaths (-3.1 percent) from 1997.
- California's 1998 infant death rate was the lowest ever recorded, 5.7 infant deaths per 1,000 live births. This was a decrease of 3.4 percent from 1997.

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INTRODUCTION

This report is the first of two annual vital statistics reports prepared by the Vital Statistics Section of the Department of Health Services' Center for Health Statistics. This report is an advance report containing final counts of California's 1998 vital events summarized for the State and counties. The purpose of this report is to provide early access to California's summary vital statistics data. Several months following the publication of this advance report, a second, more comprehensive and detailed annual report, Vital Statistics of California 1998, will be published. In addition, tables of 1998 vital statistics data are available on the Center for Health Statistics Home Page (www.dhs.ca.gov/hisp/chs/chsindex.htm).

This advance report contains data concerning California's vital events for 1998. Data are presented on the number and rate of live births, deaths, fetal deaths and infant deaths for the State, counties and three city health departments. Age, race, and sex-specific data on births and deaths are also presented for the State, counties and three city health departments. Limited trend data are presented for the State and, where appropriate, comparative data for the United States are included.

Population data used in this report were from the following Department of Finance reports: Report 98 E-2, January 1999; Report E-1 City/County Population Estimates with Annual Percent Change, May 1999; 1997 Population Estimates by Age, Race/Ethnicity and Sex, June 1999; 1998 Population Projections By Age Race/Ethnicity and Sex, December 1998. Please refer to each table for the source of population estimates and projections.

The sources of the vital statistics data presented in this report are California's birth, death and fetal death certificates registered by the Office of Vital Records. The population data used in preparing this report were obtained from the Demographic Research Unit in the California Department of Finance.

At the end of this report is a discussion of some of the limitations involved in using the data contained in this report, and a set of definitions of key terms. A more complete discussion of these and other important issues concerning the use of California's vital events will be

included in Vital Statistics of California 1998.

In addition to this advance report and annual Vital Statistics of California, there are a number of other reports prepared by the Department of Health Services' Center for Health Statistics. These provide more detailed data on particular vital statistics topics, such as trends in cesarean births. Information concerning these reports is available in the Catalog of Publications and Electronic Data Products prepared by the Center. Copies of this catalog can be obtained by calling (916) 445-6355, or by writing to the Department of Health Services, Center for Health Statistics, Office of Health Information and Research, P.O. Box 942732, Sacramento, California, 94234-7320.

SECTION I

STATE AND COUNTY VITAL STATISTICS SUMMARY

Presented in **Table 1** and **Figure 1** are summary vital statistics data on California's population, live births, deaths, fetal deaths and infant deaths from 1980 through 1998. Similar data for 1998 are presented for each of California's 58 counties in **Table 2** and for three city health departments in **Table 2A**.

Population

The estimated population of California in 1998 was 33,494,000, an increase of 537,000 individuals (1.6 percent) over the state's population in 1997 (**Table 1**).¹ California's population comprises 12.4 percent of the total United States population, or approximately one of every eight U.S. residents.²

As shown in **Table 2**, the respective populations of California's counties in 1998 ranged from a high of 9,649,800 in Los Angeles to a low of 1,180 in Alpine. Over one-fourth (28.8 percent) of California's total population resides in Los Angeles County. In addition, the combined populations of counties having a population of over one million (Alameda, Los Angeles, Orange, Riverside, Sacramento, San Bernardino, San Diego, and Santa Clara) accounted for over two-thirds (67.6 percent) of the State's population.

Live Births

There were 521,265 live births among California residents in 1998, a drop of 2,909 births (-0.6 percent) from 1997. As shown in Table 1, this represents the eighth consecutive drop in the total number of live births for the State. Prior to 1991, the number of live births in California had increased each year for seventeen straight years dating back to 1974.³ In 1998, California's live births represented 13.2 percent of all preliminary U.S. live births, or approximately one of every eight births.⁴

As shown in **Table 2** the number of live births in 1998 among the residents of California's 58 counties ranged from a high of 158,604 in Los Angeles to a low of 15 in Alpine. Nearly one-third of California's births were to Los Angeles County residents.

Birth Rate

In 1998 California's birth rate per 1,000 population was 15.6, a drop of 1.9 percent from the rate of 15.9 in 1997 (**Table 1**). The drop in California's birth rate since 1990 represents a downward shift from the relatively consistent upward trend in California's birth rate that began in 1974.³

California's birth rate in 1998 was higher than the preliminary rate for the United States, 15.6 compared to 14.6, continuing a consistent trend extending back many years.^{4,5}

Birth rates among California's counties in 1998 ranged from a high of 19.1 in Tulare County to a low of 5.7 in Sierra (**Table 2**).

Deaths

There were 225,450 deaths among California residents in 1998, an increase of 2,012 deaths (0.9 percent) from 1997. As shown in Table 1, this was the second increase after two consecutive years of decreases in the total number of deaths for the State. In 1998, California's deaths represented 9.6 percent of all preliminary U.S. deaths, approximately one of every ten deaths.⁴

As shown in **Table 2**, the number of deaths in 1998 among the residents of California's counties ranged from a high of 58,923 in Los Angeles to a low of eight in Alpine. Over one-fourth (26.1 percent) of California's deaths were among Los Angeles County residents.

Death Rate

In 1998, California's death rate per 1,000 population was 6.7, a decrease of 1.5 percent from the 1997 rate of 6.8.

California's death rate in 1998 was lower than the preliminary death rate for the United States as a whole, 6.7 compared to 8.7, a pattern that has remained unchanged for many years.^{4,5}

Among California's counties, the death rate in 1998 ranged from a high of 14.5 in Lake County to a low of 3.6 in Mono. Many factors affect the variation in county death rates shown in **Table 2**, particularly the different age distributions associated with the respective populations of each county. For purposes of comparing death rates among county populations, it is preferable to use age-adjusted death rates rather than crude death rates shown in **Table 2**. Other reports prepared by the Department of Health Services contain age-adjusted death rates by county.^{6,7}

Fetal Deaths and Fetal Death Ratio

In 1998, there were 3,053 fetal deaths among California's residents, an increase of 57 fetal deaths (1.9 percent) from 1997 (**Table 1**). The 1998 fetal death ratio for California was 5.9 fetal deaths per 1,000 live births.

Infant Deaths

There were 2,994 infant deaths among California's residents in 1998, a drop of 97 infant deaths (-3.1 percent) from 1997. As shown in **Table 1**, this was the ninth consecutive decrease since the high of 4,853 infant deaths in 1989. In 1998, California's infant deaths represented 10.5 percent of all U.S. infant deaths, or approximately one of every nine infant deaths.⁴

Infant Death Rate

In 1998, California's infant death rate per 1,000 live births was 5.7 and was a decrease of -3.4 percent from 1997. This was the lowest infant death rate ever recorded for the state.

California's infant death rate in 1998 was lower than the preliminary infant death rate for the United States as a whole, 5.7 compared to 7.2.⁴ California's infant death rate has consistently fallen below the U.S. rate.

Infant death rates in 1998 for most of California's counties are shown in **Table 2**. The small number in many of the smaller counties prevents the calculation of reliable infant death rates. Among those counties with infant death rates that have been calculated, the rates vary from a high of 8.9 in Humboldt to a low of 2.3 in Marin. Even in some of the medium and large counties, the infant death rate can vary significantly from year to year. For a more reliable assessment of infant death rates by county, infant death rates for several years should be examined. Other reports by the Department of Health Services contain trend data relating to county infant death rates.⁸

Births, Deaths, Fetal Deaths and Infant Deaths by City Health Department

Table 2A shows the numbers and rates for California's three city health departments within their respective counties. Berkeley residents had 4.9 percent (1,023 births) of the 20,933 live births in Alameda County, and showed a birth rate of 9.5. Of the 158,604 births in Los Angeles County, Long Beach had 8,509 births (5.4 percent) with a birth rate of 19.1 and Pasadena had 2,335 births (1.5 percent) with a birth rate of 16.7.

Berkeley residents accounted for 674 of the 9,801 total deaths in Alameda County (6.9 percent) with a death rate of 6.2. Long Beach accounted for 5.6 percent (3,290 deaths) of the total deaths in Los Angeles County, while Pasadena accounted for 2.0 percent (1,175 deaths). The death rates for Long Beach and Pasadena were 7.4 and 8.4 respectively.

Berkeley had eight fetal deaths in 1998, 6.1 percent of the 131 fetal deaths in Alameda County and had a fetal death rate of 7.8. Of the 923 fetal deaths in Los Angeles County, Long Beach had 61 (6.6 percent) and Pasadena had nine (1.0 percent) with fetal death rates of 7.2 and 3.9 respectively.

There were four infant deaths in Berkeley in 1998, 3.8 percent of the 106 infant deaths in Alameda County. Los Angeles County had 936 infant deaths in 1998 and of those 60 were in Long Beach and 15 were in Pasadena. The infant death rates for Long Beach and Pasadena were 7.1 and 6.4 respectively.

TABLE 1
POPULATION, LIVE BIRTHS, DEATHS,
FETAL DEATHS, AND INFANT DEATHS
CALIFORNIA, 1980 - 1998
(By Place of Residence)

YEAR	POPULATION	LIVE BIRTHS		DEATHS		FETAL DEATHS		INFANT DEATHS	
		Number	Rate ¹	Number	Rate ¹	Number	Ratio ²	Number	Rate ²
1998	33,494,000	521,265	15.6	225,450	6.7	3,053	5.9	2,994	5.7
1997	32,957,000	524,174	15.9	223,438	6.8	2,996	5.7	3,091	5.9
1996	32,383,000	538,628	16.6	222,308	6.9	3,330	6.2	3,186	5.9
1995	32,063,000	551,226	17.2	222,626	6.9	3,355	6.1	3,478	6.3
1994	31,790,000	567,034	17.8	222,854	7.0	3,299	5.8	3,948	7.0
1993	31,517,000	584,483	18.5	220,271	7.0	3,574	6.1	3,970	6.8
1992	31,188,000	600,838	19.3	214,586	6.9	3,704	6.2	4,174	6.9
1991	30,565,000	609,228	19.9	214,220	7.0	3,834	6.3	4,596	7.5
1990	29,944,000	611,666	20.4	213,766	7.1	3,989	6.5	4,828	7.9
1989	29,142,100	569,308	19.5	215,930	7.4	3,824	6.7	4,853	8.5
1988	28,393,100	532,708	18.8	215,185	7.6	3,527	6.6	4,559	8.6
1987	27,716,900	503,376	18.2	209,395	7.6	3,504	7.0	4,530	9.0
1986	27,052,300	481,905	17.8	202,826	7.5	3,259	6.8	4,298	8.9
1985	26,402,600	470,816	17.8	201,815	7.6	3,171	6.7	4,475	9.5
1984	25,816,300	447,394	17.3	195,470	7.6	3,110	7.0	4,212	9.4
1983	25,336,300	435,722	17.2	188,018	7.4	3,049	7.0	4,226	9.7
1982	24,805,000	429,631	17.3	188,255	7.6	3,333	7.8	4,218	9.8
1981	24,277,700	420,418	17.3	184,732	7.6	3,481	8.3	4,276	10.2
1980	23,780,100	402,720	16.9	186,428	7.8	3,594	8.9	4,451	11.1

¹ Per 1,000 population.

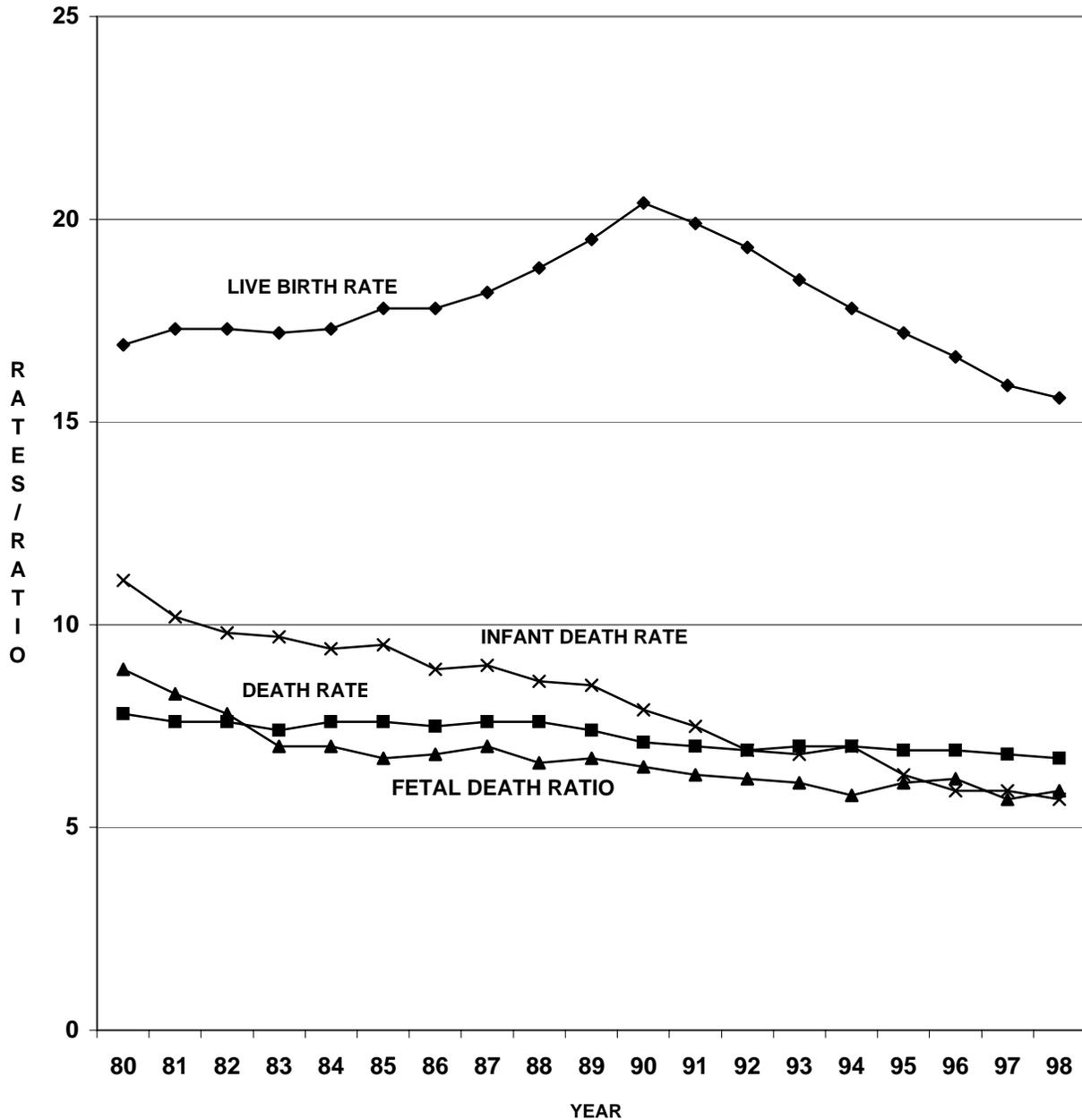
² Per 1,000 live births.

Note: Fetal deaths include only those with a stated or presumed period of gestation of 20 weeks or more. Infant deaths are those under one year of age.

Source: State of California, Department of Finance, Demographic Research Unit; 1980-1996 Population: 1970-1996 Race/Ethnic Population Estimates by County with Age and Sex detail, January 1998. 1997 and 1998 Population: Population Estimates for California Counties, Report 98 E-2, July 1 1990 through July 1, 1998, January 1999. Data for 1998 are provisional.

State of California, Department of Health Services, Birth, Death, and Fetal Death Records.

FIGURE 1
VITAL STATISTICS RATES/RATIO
CALIFORNIA, 1980 - 1998
(BY PLACE OF RESIDENCE)



Note: Live birth and death rates are per 1,000 population.
 Infant death rates and fetal death ratios are per 1,000 live births.

Source: Table 1.

TABLE 2
POPULATION, LIVE BIRTHS, DEATHS, FETAL DEATHS, AND INFANT DEATHS
CALIFORNIA COUNTIES, 1998
(BY PLACE OF RESIDENCE AND BY PLACE OF OCCURRENCE)

COUNTY	POPULATION	LIVE BIRTHS			DEATHS			FETAL DEATHS		INFANT DEATHS	
		Residence		Occurrence	Residence		Occurrence	Residence		Residence	
		Number	Rate		Number	Rate		Number	Ratio	Number	Rate
CALIFORNIA	33,494,000	521,265	15.6	522,653	225,450	6.7	227,697	3,053	5.9	2,994	5.7
ALAMEDA	1,428,300	20,933	14.7	21,747	9,801	6.9	9,707	131	6.3	106	5.1
ALPINE	1,180	15	12.7	-	8	6.8	11	-	-	-	-
AMADOR	33,100	263	7.9	190	333	10.1	291	5	b	1	a,b
BUTTE	199,700	2,267	11.4	2,642	2,133	10.7	2,256	10	4.4	18	7.9
CALAVERAS	38,250	288	7.5	59	382	10.0	314	3	a,b	1	a,b
COLUSA	18,650	314	16.8	179	146	7.8	101	2	a,b	1	a,b
CONTRA COSTA	916,900	12,506	13.6	10,607	6,659	7.3	6,577	74	5.9	74	5.9
DEL NORTE	27,800	316	11.4	300	272	9.8	303	2	a,b	1	a,b
EL DORADO	150,200	1,677	11.2	1,311	1,078	7.2	926	13	7.8	6	3.6
FRESNO	785,100	14,363	18.3	15,076	5,422	6.9	5,744	100	7.0	93	6.5
GLENN	26,850	380	14.2	3	220	8.2	116	3	a,b	3	a,b
HUMBOLDT	125,800	1,457	11.6	1,495	1,177	9.4	1,185	9	6.2	13	8.9
IMPERIAL	143,400	2,500	17.4	2,415	853	5.9	817	5	2.0	18	7.2
INYO	18,300	201	11.0	317	208	11.4	202	1	a,b	1	a,b
KERN	640,100	11,521	18.0	11,001	4,627	7.2	4,424	76	6.6	77	6.7
KINGS	124,200	2,164	17.4	2,548	746	6.0	646	11	5.1	17	7.9
LAKE	55,100	566	10.3	388	800	14.5	678	1	a,b	4	a,b
LASSEN	33,450	294	8.8	267	213	6.4	186	3	a,b	1	a,b
LOS ANGELES	9,649,800	158,604	16.4	161,424	58,923	6.1	59,894	923	5.8	936	5.9
MADERA	114,700	2,073	18.1	1,565	815	7.1	699	19	9.2	13	6.3
MARIN	245,000	2,569	10.5	1,703	1,854	7.6	1,915	17	6.6	6	2.3
MARIPOSA	16,050	135	8.4	5	176	11.0	96	1	a,b	2	a,b
MENDOCINO	86,200	1,082	12.6	1,014	809	9.4	764	10	9.2	6	5.5
MERCED	204,400	3,529	17.3	2,911	1,355	6.6	1,186	18	5.1	22	6.2
MODOC	9,825	81	8.2	54	120	12.2	82	1	a,b	1	a,b
MONO	10,600	135	12.7	-	38	3.6	31	-	-	-	-
MONTEREY	384,100	6,813	17.7	6,380	2,290	6.0	2,201	43	6.3	42	6.2
NAPA	122,600	1,477	12.0	1,208	1,279	10.4	1,282	8	5.4	5	3.4
NEVADA	90,100	757	8.4	916	855	9.5	784	1	a,b	6	b
ORANGE	2,763,900	46,189	16.7	48,861	16,133	5.8	16,517	238	5.2	205	4.4
PLACER	223,100	2,673	12.0	2,314	1,652	7.4	1,755	12	4.5	11	4.1
PLUMAS	20,400	126	6.2	117	208	10.2	176	1	a,b	4	a,b
RIVERSIDE	1,458,500	23,230	15.9	21,689	11,766	8.1	11,164	125	5.4	175	7.5
SACRAMENTO	1,166,100	17,757	15.2	19,366	8,780	7.5	9,475	121	6.8	109	6.1
SAN BENITO	47,800	891	18.6	555	273	5.7	213	7	b	4	a,b
SAN BERNARDINO	1,645,800	28,245	17.2	25,762	10,638	6.5	11,322	183	6.5	213	7.5
SAN DIEGO	2,828,300	43,422	15.4	44,516	18,767	6.6	19,470	290	6.7	224	5.2
SAN FRANCISCO	789,500	8,157	10.3	11,491	6,649	8.4	7,055	58	7.1	41	5.0
SAN JOAQUIN	551,500	8,647	15.7	8,370	4,178	7.6	4,183	51	5.9	52	6.0
SAN LUIS OBISPO	238,100	2,373	10.0	2,214	1,992	8.4	1,953	16	6.7	14	5.9
SAN MATEO	721,400	10,142	14.1	6,426	4,988	6.9	5,061	43	4.2	44	4.3
SANTA BARBARA	405,000	5,764	14.2	5,976	2,872	7.1	2,878	29	5.0	33	5.7
SANTA CLARA	1,701,400	26,659	15.7	30,608	8,977	5.3	9,589	111	4.2	102	3.8
SANTA CRUZ	250,800	3,421	13.6	3,539	1,670	6.7	1,618	15	4.4	20	5.8
SHASTA	164,800	1,943	11.8	1,993	1,713	10.4	1,891	12	6.2	9	4.6
SIERRA	3,310	19	5.7	-	35	10.6	36	-	-	-	-
SISKIYOU	44,100	461	10.5	361	451	10.2	421	2	a,b	1	a,b
SOLANO	385,500	5,510	14.3	5,276	2,373	6.2	2,404	26	4.7	36	6.5
SONOMA	440,500	5,472	12.4	5,661	3,690	8.4	3,702	32	5.8	30	5.5
STANISLAUS	431,100	6,927	16.1	7,733	3,386	7.9	3,653	43	6.2	47	6.8
SUTTER	76,700	1,158	15.1	2,009	620	8.1	443	11	9.5	9	7.8
TEHAMA	55,200	651	11.8	585	584	10.6	435	6	b	3	a,b
TRINITY	13,200	121	9.2	73	157	11.9	103	-	-	2	a,b
TULARE	361,400	6,890	19.1	6,235	2,555	7.1	2,410	49	7.1	47	6.8
TUOLUMNE	52,700	429	8.1	510	583	11.1	469	2	a,b	2	a,b
VENTURA	738,200	11,576	15.7	10,882	4,596	6.2	4,374	59	5.1	65	5.6
YOLO	156,000	2,148	13.8	1,797	1,043	6.7	875	14	6.5	7	3.3
YUBA	60,300	984	16.3	9	529	8.8	634	7	b	11	b

^a Rates and ratios are not calculated for fewer than five events.

^b Fetal death ratios and infant death rates are not calculated for counties reporting fewer than 1,000 births.

Note: Fetal death ratios and infant death rates are per 1,000 live births. Live birth and death rates are per 1,000 population.

Fetal deaths include only those with a stated or presumed period of gestation of 20 weeks or more. Infant deaths are those under one year of age.

County population will not add to total due to rounding.

Source: State of California, Department of Finance, Demographic Research Unit. 1998 Population: Population Estimates for California Counties, Report 98 E-2.

July 1, 1990 through July 1, 1998, January 1999. Data for 1998 are provisional.

State of California, Department of Health Services, Birth, Death and Fetal Death Records.

TABLE 2A
POPULATION, LIVE BIRTHS, DEATHS, FETAL DEATHS, AND INFANT DEATHS
CITY HEALTH DEPARTMENTS, 1998
(BY PLACE OF RESIDENCE AND BY PLACE OF OCCURRENCE)

LOCAL HEALTH JURISDICTION	POPULATION Jan. 1, 1998	LIVE BIRTHS			DEATHS			FETAL DEATHS		INFANT DEATHS	
		Residence		Occurrence	Residence		Occurrence	Number	Ratio	Number	Rate
		Number	Rate		Number	Rate					
CALIFORNIA	33,226,000	521,265	15.7	522,653	225,450	6.8	227,697	3,053	5.9	2,994	5.7
ALAMEDA	1,413,400	20,933	14.8	21,747	9,801	6.9	9,707	131	6.3	106	5.1
BERKELEY	108,100	1,023	9.5	7,054	674	6.2	892	8	7.8	4	a
LOS ANGELES	9,587,300	158,604	16.5	161,424	58,923	6.1	59,894	923	5.8	936	5.9
LONG BEACH	445,400	8,509	19.1	9,226	3,290	7.4	3,849	61	7.2	60	7.1
PASADENA	140,200	2,335	16.7	4,828	1,175	8.4	1,350	9	3.9	15	6.4

^a Rates and ratios are not calculated for fewer than five events.

Note: Fetal death ratios and infant death rates are not calculated for counties reporting fewer than 1,000 births.

Fetal death ratios and infant death rates are per 1,000 live births. Live birth and death rates are per 1,000 population.

Fetal deaths include only those with a stated or presumed period of gestation of 20 weeks or more. Infant deaths are those under one year of age.

City numbers are included in their respective county totals.

Source: State of California, Department of Finance, Demographic Research Unit. 1998 Population: Report E-1 99, City/County

Population Estimates, Jan 1, 1998 - Jan 1, 1999, May 1999.

State of California, Department of Health Services, Birth, Death and Fetal Death Records.

SECTION II

LIVE BIRTHS

Presented in **Table 3** through **Table 11** are 1998 data on live births for California, for each county and three city health departments by mother's age, mother's race/ethnicity, infant's birthweight, and trimester prenatal care began.

Live Births by Mother's Age

Table 3 shows the number of births grouped by mother's age for the years 1994-1998. The largest number of births for each of the five years shown was for mothers aged 25-29. Births to mothers aged 20-34 accounted for 73.5 percent of all births in 1998, 73.7 percent in 1997 and 74.9 percent in 1994. The percentage of teen births (mothers under age 20) among all births decreased to 11.4 percent from 11.7 percent in 1997. Women thirty-five and over accounted for 15.2 percent of all births in 1998 up from 14.7 percent in 1997 and 12.7 percent in 1994.

Table 3 shows that between 1994 and 1998 the number of births to mothers aged under 15-34 has decreased and the number of births to mothers aged 35 and over has increased. The largest percentage decrease in the number of live births between 1997 and 1998 was among mothers aged under 15 (-15.1 percent). The largest percentage increase in the number of live births between 1997 and 1998 was among mothers aged 40-44 (3.7 percent).

The number of live births in 1998 by mother's age for each county and three city health departments is shown in **Table 4**. Cross-county comparisons of births by mother's age, e.g., percent of teen births, should include more than a single year of data. Other reports from the Center provide these types of analyses.^{6,7}

Birth Rates by Mother's Age

Also shown in **Table 3** are the birth rates by mother's age for the years 1994 through 1998, and the changes in these rates between 1997 and 1998. The number of births per 1,000 women aged 15 through 44 (known as the general fertility rate) decreased from 72.2 in 1997 to 71.4 in 1998, a drop

of 1.1 percent, and a decrease of 8.6 percent from the 1994 rate of 78.1. The birth rate went down in 1998 compared to 1997 in the age groups under 15 through 20-24. The birth rate increased for mothers aged 25-29 through 40-44. The rate for mothers aged 45 and over was unchanged from 1997. The largest percentage increase in the birth rate was among mothers aged 30-34 (2.3 percent). Mothers aged under 15 had the largest decrease (-18.2 percent).

Live Births by Mother's Race/Ethnicity

As shown in **Table 5**, Hispanic mothers accounted for the largest number and percentage of births with 257,463 (45.4 percent) in 1994, 253,726 (46.0 percent) in 1995, 254,672 in 1996 (47.3 percent), 248,795 in 1997 (47.5 percent) and 247,796 (47.5 percent) in 1998.

The number and percent changes in live births from 1997 to 1998 by mother's race/ethnicity showed a decrease for all race/ethnic groups with the exception of American Indians which increased by 0.2 percent. The largest percentage decrease in the number of live births by mother's race/ethnicity was the decrease in births to Black mothers (-2.1 percent).

The number of live births in 1998 by mother's race/ethnicity for each county and three city health departments is shown in **Table 6**.

Birth Rates by Mother's Race/Ethnicity

Along with their higher number of births, Hispanics also had the highest birth rate of any race/ethnic group for the five years shown (**Table 5**). Their 1998 birth rate of 24.7 births per 1,000 population was 62.5 percent higher than among Blacks (15.2) and 65.8 percent higher than among Asian/Pacific

Islanders (14.9). The Hispanic birth rate was just over two and one-third times the birth rate for Whites (10.4) and almost two times the birth rate among American Indians (13.0). With the exception of American Indians, the birth rates for all race ethnic groups have decreased each year for the last five years.

Live Births By Mother's Age and Race/Ethnicity

The number of live births in 1998 by both mother's age and race/ethnicity are shown in **Table 7**. The highest percentage of births to mothers under 20 was to American Indian (18.6 percent) and Black mothers (16.9 percent). Asian mothers had the lowest percentage of births to mothers under age 20 with 4.5 percent. Of the mothers aged 40 and over, Asian mothers had the highest percentage of births with 4.2 percent.

Live Births by Birthweight and Mother's Race/Ethnicity

Shown in **Table 8** are the number and percent of live births in 1998 by birthweight and race/ethnicity of the mother. Among all births in 1998, 32,438 (6.2 percent) weighed less than 2500 grams. Black mothers had the highest percentage of low birthweight infants (11.7 percent), and Hispanic mothers had the lowest (5.6 percent).

Numbers of live births in 1998 by birthweight are shown for each county and three city health departments in **Table 9**. Comparisons of low birthweight infants among counties should include more than a single year of data and are contained in other reports of the Department of Health Services.^{6,7}

Live Births by Trimester Prenatal Care Began and Race/Ethnicity of Mother

The number and percent of live births by trimester prenatal care began and race/ethnicity of mother are shown in **Table 10**. Among all births in 1998, 422,866 (81.1 percent) received early prenatal care (care beginning in the first trimester). The percentage of mothers receiving early prenatal care ranged from a high of 87.1 percent among White

mothers to a low of 65.5 percent among Pacific Islander mothers.

Mothers who received no prenatal care in 1998 accounted for 0.8 percent of the total births (4,365 births). The percentage of mothers receiving no prenatal care ranged from a high of 2.6 percent for Pacific Islander mothers to a low of 0.4 percent among Asian mothers.

Numbers of births in 1998, by trimester prenatal care began, are shown for each county and three city health departments in **Table 11**. Comparisons of percentages of mothers receiving early or no prenatal care among counties should include more than a single year of data and are included in other reports of the Department of Health Services.^{6,7}

**TABLE 3
LIVE BIRTHS AND BIRTH RATES
BY AGE OF MOTHER
CALIFORNIA, 1994 - 1998
(By Place of Residence)**

AGE OF MOTHER (In Years)	NUMBER OF BIRTHS					PERCENT CHANGE 1997 TO 1998
	1994	1995	1996	1997	1998	
TOTAL	567,034	551,226	538,628	524,174	521,265	-0.6
Under 15	1,687	1,640	1,485	1,256	1,066	-15.1
15-19	68,198	66,644	63,118	59,851	58,141	-2.9
20-24	140,172	132,607	127,431	122,924	121,317	-1.3
25-29	154,705	148,585	145,795	141,195	140,369	-0.6
30-34	129,926	127,853	125,030	121,938	121,326	-0.5
35-39	59,550	60,577	61,836	62,674	64,210	2.5
40-44	12,054	12,573	13,158	13,506	14,010	3.7
45 and Over	668	679	685	766	777	1.4
Not Stated	74	68	90	64	49	-23.4

AGE OF MOTHER (In Years)	BIRTH RATES ¹					PERCENT CHANGE 1997 TO 1998
	1994	1995	1996	1997	1998	
TOTAL	78.1 ^a	76.3 ^a	74.7 ^a	72.2 ^a	71.4 ^a	-1.1
Under 15	1.6	1.5	1.3	1.1	0.9	-18.2
15-19	70.2	67.2	61.6	56.7	53.2	-6.2
20-24	130.0	128.2	128.1	122.8	120.3	-2.0
25-29	125.3	123.9	123.6	121.6	122.2	0.5
30-34	91.9	91.9	92.6	91.4	93.5	2.3
35-39	43.5	43.7	44.0	44.4	45.2	1.8
40-44	10.1	10.3	10.5	10.4	10.5	1.0
45 and Over	0.7	0.7	0.6	0.7	0.7	-
Not Stated	NA	NA	NA	NA	NA	NA

NA Not Applicable.

¹ Age-specific birth rates are per 1,000 females in specified age groups. "Under 15" rates are calculated per 1,000 females aged 10-14 years; "45 and Over" rates are calculated per 1,000 females aged 45-49 years.

^a Total rates are per 1,000 females 15-44 years of age, technically known as the General Fertility Rate.

Note: Rates in this report may differ from rates in previously published Advance Reports since rates were revised to reflect the most current population released by the Department of Finance.

Source: State of California, Department of Finance; 1994-1996 Population: 1970-1996 Race/Ethnic Population Estimates by County with Age and Sex detail, January 1998. 1997 Population: Population Estimates by Age, Race/Ethnicity and Sex, June 1999. 1998 Population: Population Projections by Age, Race/Ethnicity and Sex, December 1998.

State of California, Department of Health Services, Birth Records.

TABLE 4
LIVE BIRTHS BY AGE OF MOTHER
CALIFORNIA COUNTIES AND CITY HEALTH DEPARTMENTS, 1998
(By Place of Residence)

COUNTY	TOTAL	AGE OF MOTHER (In Years)													
		UNDER 15	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35-39	40-44	45-49	50 AND OVER	UNKNOWN
CALIFORNIA	521,265	1,066	3,215	7,094	11,321	16,018	20,493	121,317	140,369	121,326	64,210	14,010	730	47	49
ALAMEDA	20,933	40	98	217	345	482	613	4,046	5,673	5,550	3,153	678	37	-	1
BERKELEY ¹	1,023	-	1	4	5	8	14	138	219	300	235	96	3	-	-
ALPINE	15	1	-	-	-	1	1	4	2	4	1	1	-	-	-
AMADOR	263	-	-	1	2	6	17	69	71	51	35	9	2	-	-
BUTTE	2,267	3	17	42	74	89	104	625	601	433	219	54	6	-	-
CALAVERAS	288	-	1	4	5	7	8	70	88	64	28	11	-	-	2
COLUSA	314	1	1	7	5	11	11	100	86	58	25	9	-	-	-
CONTRA COSTA	12,506	15	68	123	184	264	365	2,213	3,253	3,564	2,023	408	23	3	-
DEL NORTE	316	1	4	10	12	23	16	101	70	50	24	5	-	-	-
EL DORADO	1,677	3	5	11	43	39	51	330	428	443	267	52	5	-	-
FRESNO	14,363	48	162	332	527	640	798	4,056	3,665	2,615	1,236	253	28	2	1
GLENN	380	4	2	9	15	13	24	110	95	69	32	7	-	-	-
HUMBOLDT	1,457	3	6	15	25	51	84	414	409	273	142	32	2	1	-
IMPERIAL	2,500	4	28	60	101	92	118	651	663	490	236	56	-	-	1
INYO	201	-	-	3	9	10	9	51	47	42	27	3	-	-	-
KERN	11,521	47	122	244	400	519	668	3,362	2,969	1,950	1,054	177	8	-	1
KINGS	2,164	10	18	52	70	94	139	666	573	350	159	33	-	-	-
LAKE	566	-	6	16	21	28	39	163	127	92	61	13	-	-	-
LASSEN	294	-	1	5	8	16	21	79	90	41	27	5	-	1	-
LOS ANGELES	158,604	337	1,002	2,227	3,541	4,944	6,209	37,718	42,800	35,973	19,103	4,469	252	9	20
LONG BEACH ¹	8,509	15	67	118	197	288	380	2,198	2,286	1,806	903	234	13	1	3
PASADENA ¹	2,335	6	16	19	39	51	70	445	593	647	369	73	7	-	-
MADERA	2,073	10	25	37	69	105	123	681	505	330	148	36	3	-	1
MARIN	2,569	1	4	6	17	28	24	266	514	836	667	195	10	1	-
MARIPOSA	135	-	1	2	2	8	5	35	40	23	12	7	-	-	-
MENDOCINO	1,082	2	11	19	26	46	54	295	308	198	93	29	1	-	-
MERCED	3,529	8	40	69	89	148	212	1,074	916	618	278	73	3	1	-
MODOC	81	-	-	1	2	3	5	31	23	9	4	3	-	-	-
MONO	135	1	-	2	2	1	4	33	43	24	17	8	-	-	-
MONTEREY	6,813	20	38	114	177	240	303	1,850	1,829	1,395	683	164	-	-	-
NAPA	1,477	2	11	15	28	40	44	347	376	360	205	48	1	-	-
NEVADA	757	1	2	6	15	35	27	152	191	193	99	31	4	1	-
ORANGE	46,189	61	205	427	684	1,037	1,345	9,202	13,335	12,310	6,279	1,236	61	2	5
PLACER	2,673	4	13	20	38	54	69	469	727	769	433	76	1	-	-
PLUMAS	126	-	2	-	5	6	7	25	34	34	11	2	-	-	-
RIVERSIDE	23,230	45	158	370	598	900	1,180	6,210	6,108	4,860	2,350	439	12	-	-
SACRAMENTO	17,757	37	102	261	408	590	749	4,294	4,851	4,012	1,964	455	31	3	-
SAN BENITO	891	5	4	9	23	34	49	223	251	198	77	18	-	-	-
SAN BERNARDINO	28,245	79	218	503	772	1,128	1,452	7,828	7,657	5,454	2,617	509	23	-	5
SAN DIEGO	43,422	77	220	506	764	1,173	1,614	9,989	11,937	10,346	5,554	1,183	44	9	6
SAN FRANCISCO	8,157	11	23	55	103	127	180	1,202	1,893	2,596	1,571	375	17	3	1
SAN JOAQUIN	8,647	29	66	159	238	337	428	2,295	2,399	1,716	784	181	13	1	1
SAN LUIS OBISPO	2,373	6	14	22	43	81	96	527	638	536	321	84	5	-	-
SAN MATEO	10,142	16	40	90	143	179	236	1,600	2,404	3,045	1,959	407	21	1	1
SANTA BARBARA	5,764	11	42	87	128	198	223	1,332	1,520	1,313	734	160	15	1	-
SANTA CLARA	26,659	18	101	245	396	573	703	4,580	7,190	7,697	4,198	919	33	4	2
SANTA CRUZ	3,421	9	27	39	77	97	111	676	904	849	493	134	5	-	-
SHASTA	1,943	3	12	33	60	94	110	517	565	344	167	36	2	-	-
SIERRA	19	-	-	-	-	-	3	5	3	4	4	-	-	-	-
SISKIYOU	461	-	1	3	15	22	27	129	119	91	40	13	1	-	-
SOLANO	5,510	10	38	59	115	161	238	1,390	1,497	1,236	647	114	5	-	-
SONOMA	5,472	10	16	60	82	152	187	1,087	1,496	1,407	809	151	14	-	1
STANISLAUS	6,927	15	70	117	196	263	349	1,976	1,950	1,314	564	106	3	4	-
SUTTER	1,158	1	12	16	22	48	59	330	338	218	95	18	1	-	-
TEHAMA	651	3	4	18	23	31	33	183	164	120	60	12	-	-	-
TRINITY	121	-	1	1	7	6	6	32	30	23	12	3	-	-	-
TULARE	6,890	33	91	173	251	343	429	2,112	1,769	1,108	459	110	12	-	-
TUOLUMNE	429	-	-	7	13	11	25	126	112	84	42	8	1	-	-
VENTURA	11,576	16	48	122	225	297	349	2,505	3,216	2,878	1,587	313	20	-	-
YOLO	2,148	3	8	30	45	56	80	525	565	523	246	65	2	-	-
YUBA	984	2	6	13	33	37	60	356	242	143	75	14	3	-	-

¹ Berkeley, Long Beach and Pasadena are city health departments.

Note: City numbers are included in their respective county totals.

Source: State of California, Department of Health Services, Birth Records.

TABLE 5
LIVE BIRTHS AND BIRTH RATES
BY RACE/ETHNICITY¹ OF MOTHER
CALIFORNIA, 1994-1998
(By Place of Residence)

RACE/ETHNICITY OF MOTHER	NUMBER OF BIRTHS					PERCENT CHANGE 1997-1998
	1994	1995	1996	1997	1998	
TOTAL	567,034	551,226	538,628	524,174	521,265	-0.6
AMERICAN INDIAN ²	2,694	2,735	2,642	2,582	2,587	0.2
ASIAN/PACIFIC ISLANDER	57,810	57,238	56,942	56,634	55,536	-1.9
BLACK	41,481	39,166	37,029	35,957	35,200	-2.1
HISPANIC	257,463	253,726	254,672	248,795	247,796	-0.4
WHITE ³	207,586	198,361	187,343	180,206	180,146	a

RACE/ETHNICITY OF MOTHER	BIRTH RATE ⁴					PERCENT CHANGE 1997 TO 1998
	1994	1995	1996	1997	1998	
TOTAL	17.8	17.2	16.6	15.9	15.6	-1.9
AMERICAN INDIAN ²	14.0	14.2	13.7	13.2	13.0	-1.5
ASIAN/PACIFIC ISLANDER	17.9	17.1	16.5	15.8	14.9	-5.7
BLACK	18.6	17.4	16.3	15.5	15.2	-1.9
HISPANIC	29.0	27.9	27.3	25.8	24.7	-4.3
WHITE ³	12.0	11.5	10.9	10.5	10.4	-1.0

¹ American Indian, Asian/Pacific Islander, Black, and White exclude Hispanic ethnicity. Hispanic includes any race category.

² Includes American Indian, Eskimo and Aleut.

³ Includes White, Other, and Unknown.

⁴ Rates are per 1,000 population.

^a Less than 0.05.

Note: Population data are available for only these five race/ethnic groups.

Rates in this report may differ from rates in previously published Advance Reports since rates were revised to reflect the most current population released by the Department of Finance.

Source: State of California, Department of Finance; 1994-1996 Population: 1970-1996 Race/Ethnic Population Estimates by County with Age and Sex detail, January 1998. 1997 Population: Population Estimates by Age, Race/Ethnicity and Sex, June 1999. 1998 Population: Population Projections by Age, Race/Ethnicity and Sex, December 1998.

State of California, Department of Health Services, Birth Records.

TABLE 6
LIVE BIRTHS BY RACE/ETHNICITY¹ OF MOTHER
CALIFORNIA COUNTIES AND CITY HEALTH DEPARTMENTS, 1998
(By Place of Residence)

COUNTY	TOTAL	RACE/ETHNICITY OF MOTHER							
		AMERICAN INDIAN ³	ASIAN	BLACK	HISPANIC	PACIFIC ISLANDER	WHITE	OTHER	UNKNOWN
CALIFORNIA	521,265	2,587	52,718	35,200	247,796	2,818	176,598	287	3,261
ALAMEDA	20,933	101	4,353	3,342	5,635	210	6,439	16	837
BERKELEY ²	1,023	1	111	149	133	4	448	1	176
ALPINE	15	4	-	1	1	-	9	-	-
AMADOR	263	3	4	1	26	1	227	-	1
BUTTE	2,267	56	141	38	383	6	1,639	4	-
CALAVERAS	288	4	3	3	36	-	241	-	1
COLUSA	314	2	2	-	203	4	103	-	-
CONTRA COSTA	12,506	49	1,331	1,401	2,998	81	6,184	6	456
DEL NORTE	316	35	14	2	48	1	216	-	-
EL DORADO	1,677	16	55	6	295	1	1,299	2	3
FRESNO	14,363	121	1,280	794	8,182	8	3,939	20	19
GLENN	380	3	27	3	164	-	182	1	-
HUMBOLDT	1,457	135	36	18	138	6	1,104	-	20
IMPERIAL	2,500	7	21	26	1,851	3	589	1	2
INYO	201	25	4	1	59	-	112	-	-
KERN	11,521	88	360	699	5,915	15	4,406	6	32
KINGS	2,164	29	76	100	1,172	3	781	2	1
LAKE	566	27	4	15	105	1	411	-	3
LASSEN	294	17	3	4	37	-	233	-	-
LOS ANGELES	158,604	262	14,304	14,246	98,074	664	30,621	115	318
LONG BEACH ²	8,509	18	951	1,385	4,214	180	1,744	10	7
PASADENA ²	2,335	4	232	297	1,081	8	692	1	20
MADERA	2,073	24	22	47	1,341	5	633	-	1
MARIN	2,569	6	154	62	526	2	1,806	1	12
MARIPOSA	135	8	2	-	11	-	114	-	-
MENDOCINO	1,082	75	12	8	304	-	670	-	13
MERCED	3,529	11	329	120	1,991	4	1,071	3	-
MODOC	81	6	-	-	18	-	57	-	-
MONO	135	5	3	2	52	-	73	-	-
MONTEREY	6,813	18	337	141	4,476	28	1,770	3	40
NAPA	1,477	3	53	6	651	5	754	1	4
NEVADA	757	6	6	2	79	2	661	-	1
ORANGE	46,189	95	5,263	663	22,305	259	17,498	12	94
PLACER	2,673	14	87	18	416	3	2,131	-	4
PLUMAS	126	2	1	1	7	-	115	-	-
RIVERSIDE	23,230	159	783	1,463	12,162	89	8,523	10	41
SACRAMENTO	17,757	161	2,333	2,150	3,750	138	9,162	6	57
SAN BENITO	891	-	22	6	557	2	301	-	3
SAN BERNARDINO	28,245	147	1,206	2,744	14,339	129	9,615	10	55
SAN DIEGO	43,422	222	3,914	2,923	17,995	345	17,904	14	105
SAN FRANCISCO	8,157	18	2,699	817	1,758	113	2,720	10	22
SAN JOAQUIN	8,647	53	1,147	615	3,507	40	3,242	5	38
SAN LUIS OBISPO	2,373	17	64	25	681	3	1,579	1	3
SAN MATEO	10,142	24	2,171	322	3,281	260	4,039	8	37
SANTA BARBARA	5,764	35	230	110	3,240	13	2,099	-	37
SANTA CLARA	26,659	92	7,199	677	9,386	175	8,945	16	169
SANTA CRUZ	3,421	10	94	25	1,711	6	1,510	1	64
SHASTA	1,943	84	52	20	169	3	1,611	-	4
SIERRA	19	-	-	-	3	-	16	-	-
SISKIYOU	461	18	6	6	62	-	365	-	4
SOLANO	5,510	32	753	892	1,321	80	2,406	2	24
SONOMA	5,472	60	216	75	1,668	17	3,391	2	43
STANISLAUS	6,927	49	322	188	3,035	29	3,296	-	8
SUTTER	1,158	12	165	28	354	4	594	1	-
TEHAMA	651	16	8	5	175	1	445	1	-
TRINITY	121	8	-	-	8	1	104	-	-
TULARE	6,890	54	195	82	4,502	9	2,045	3	-
TUOLUMNE	429	10	7	-	42	2	367	1	-
VENTURA	11,576	23	554	183	5,515	35	4,585	1	680
YOLO	2,148	16	172	32	871	7	1,043	2	5
YUBA	984	10	119	42	205	5	603	-	-

¹ American Indian, Asian, Black, Pacific Islander, White, Other and Unknown races exclude Hispanic ethnicity. Hispanic includes any race category.

² Berkeley, Long Beach and Pasadena are city health departments.

³ Includes American Indian, Eskimo and Aleut.

Note: City numbers are included in their respective county totals.

Source: State of California, Department of Health Services, Birth Records.

TABLE 7
LIVE BIRTHS BY AGE AND RACE/ETHNICITY¹ OF MOTHER
CALIFORNIA, 1998
(By Place of Residence)

AGE OF MOTHER (In Years)	TOTAL	RACE/ETHNICITY OF MOTHER							
		AMERICAN INDIAN ²	ASIAN	BLACK	HISPANIC	PACIFIC ISLANDER	WHITE	OTHER	UNKNOWN
TOTAL	521,265	2,587	52,718	35,200	247,796	2,818	176,598	287	3,261
UNDER 15	1,066	9	46	134	758	3	110	2	4
15	3,215	32	120	312	2,301	8	427	1	14
16	7,094	55	328	676	4,859	28	1,114	5	29
17	11,321	96	438	1,113	7,411	54	2,161	7	41
18	16,018	125	614	1,652	10,102	78	3,377	10	60
19	20,493	164	845	2,063	12,272	100	4,933	14	102
20-24	121,317	799	6,698	9,722	72,308	743	30,422	71	554
25-29	140,369	628	15,441	8,413	68,022	786	46,291	70	718
30-34	121,326	418	16,922	6,803	45,050	648	50,511	66	908
35-39	64,210	215	9,067	3,541	20,124	305	30,291	30	637
40-44	14,010	43	2,057	743	4,383	63	6,541	11	169
45-49	730	3	126	21	185	2	378	-	15
50 AND OVER	47	-	14	-	1	-	31	-	1
UNKNOWN	49	-	2	7	20	-	11	-	9

¹ American Indian, Asian, Black, Pacific Islander, White, Other and Unknown races exclude Hispanic ethnicity. Hispanic includes any race category.

² Includes American Indian, Eskimo and Aleut.

Source: State of California, Department of Health Services, Birth Records.

**TABLE 8
NUMBER AND PERCENT OF LIVE BIRTHS
BY BIRTHWEIGHT AND RACE/ETHNICITY¹ OF MOTHER
CALIFORNIA, 1998
(BY PLACE OF RESIDENCE)**

BIRTHWEIGHT (IN GRAMS)	TOTAL		RACE/ETHNICITY OF MOTHER															
			AMERICAN INDIAN ²		ASIAN		BLACK		HISPANIC		PACIFIC ISLANDER		WHITE		OTHER		UNKNOWN	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
TOTAL	521,265	100.0	2,587	100.0	52,718	100.0	35,200	100.0	247,796	100.0	2,818	100.0	176,598	100.0	287	100.0	3,261	100.0
UNDER 1500	6,013	1.2	35	1.4	560	1.1	939	2.7	2,601	1.0	41	1.5	1,774	1.0	7	2.4	56	1.7
1500-2499	26,425	5.1	115	4.4	3,139	6.0	3,180	9.0	11,286	4.6	118	4.2	8,358	4.7	14	4.9	215	6.6
2500-3499	275,452	52.8	1,246	48.2	33,740	64.0	20,874	59.3	132,142	53.3	1,317	46.7	84,304	47.7	170	59.2	1,659	50.9
3500-4499	204,385	39.2	1,115	43.1	14,878	28.2	9,863	28.0	97,597	39.4	1,231	43.7	78,341	44.4	92	32.1	1,268	38.9
4500 AND OVER	8,974	1.7	76	2.9	401	0.8	343	1.0	4,166	1.7	111	3.9	3,816	2.2	4	1.4	57	1.7
UNKNOWN	16	a	-	-	-	-	1	a	4	a	-	-	5	a	-	-	6	0.2

¹ American Indian, Asian, Black, Pacific Islander, White, Other and Unknown races exclude Hispanic ethnicity. Hispanic includes any race category.

² Includes American Indian, Eskimo and Aleut.

^a Less than 0.05 percent.

Note: Percents are rounded independently and may not add to totals.

Source: State of California, Department of Health Services, Birth Records.

TABLE 9
LIVE BIRTHS BY BIRTHWEIGHT
CALIFORNIA COUNTIES AND CITY HEALTH DEPARTMENTS, 1998
(By Place of Residence)

COUNTY	TOTAL	BIRTHWEIGHT					UNKNOWN
		UNDER 1500 GRAMS	1500 - 2499 GRAMS	2500 - 3499 GRAMS	3500 - 4499 GRAMS	4500 GRAMS AND OVER	
CALIFORNIA	521,265	6,013	26,425	275,452	204,385	8,974	16
ALAMEDA	20,933	253	1,249	10,976	8,084	371	-
BERKELEY ¹	1,023	15	68	494	430	16	-
ALPINE	15	-	-	9	6	-	-
AMADOR	263	2	15	119	126	1	-
BUTTE	2,267	15	92	1,123	982	55	-
CALAVERAS	288	-	12	144	125	7	-
COLUSA	314	2	18	148	136	10	-
CONTRA COSTA	12,506	140	654	6,131	5,300	281	-
DEL NORTE	316	3	12	157	136	8	-
EL DORADO	1,677	8	78	884	674	33	-
FRESNO	14,363	198	724	7,856	5,381	204	-
GLENN	380	3	12	178	180	7	-
HUMBOLDT	1,457	17	59	642	696	43	-
IMPERIAL	2,500	29	146	1,288	986	51	-
INYO	201	1	11	116	69	4	-
KERN	11,521	140	577	6,037	4,569	197	1
KINGS	2,164	30	88	1,111	881	54	-
LAKE	566	6	28	310	212	10	-
LASSEN	294	2	12	163	109	8	-
LOS ANGELES	158,604	1,932	8,476	86,633	59,052	2,509	2
LONG BEACH ¹	8,509	103	428	4,686	3,115	177	-
PASADENA ¹	2,335	40	118	1,391	761	25	-
MADERA	2,073	26	93	1,065	839	50	-
MARIN	2,569	26	109	1,265	1,113	56	-
MARIPOSA	135	4	8	75	47	1	-
MENDOCINO	1,082	11	47	520	480	24	-
MERCED	3,529	28	183	1,844	1,425	49	-
MODOC	81	-	5	46	27	3	-
MONO	135	-	6	91	37	1	-
MONTEREY	6,813	72	287	3,288	3,026	138	2
NAPA	1,477	17	57	721	644	38	-
NEVADA	757	8	35	370	328	16	-
ORANGE	46,189	463	2,075	24,537	18,366	748	-
PLACER	2,673	18	115	1,308	1,178	54	-
PLUMAS	126	-	3	59	63	1	-
RIVERSIDE	23,230	289	1,148	12,629	8,808	355	1
SACRAMENTO	17,757	222	978	9,007	7,194	356	-
SAN BENITO	891	10	34	441	381	25	-
SAN BERNARDINO	28,245	341	1,430	15,533	10,523	417	1
SAN DIEGO	43,422	525	2,078	21,948	18,027	839	5
SAN FRANCISCO	8,157	84	499	4,480	2,975	119	-
SAN JOAQUIN	8,647	112	442	4,512	3,408	172	1
SAN LUIS OBISPO	2,373	25	84	1,156	1,050	58	-
SAN MATEO	10,142	119	566	5,233	4,052	171	1
SANTA BARBARA	5,764	62	284	2,995	2,339	84	-
SANTA CLARA	26,659	269	1,343	14,269	10,361	417	-
SANTA CRUZ	3,421	30	158	1,692	1,482	59	-
SHASTA	1,943	16	90	844	928	65	-
SIERRA	19	-	-	9	10	-	-
SISKIYOU	461	2	21	256	176	6	-
SOLANO	5,510	78	273	2,802	2,237	119	1
SONOMA	5,472	52	220	2,650	2,428	122	-
STANISLAUS	6,927	92	362	3,574	2,778	121	-
SUTTER	1,158	14	65	588	472	19	-
TEHAMA	651	3	24	292	314	18	-
TRINITY	121	1	12	56	51	1	-
TULARE	6,890	61	332	3,588	2,806	102	1
TUOLUMNE	429	8	17	208	188	8	-
VENTURA	11,576	105	517	5,995	4,741	218	-
YOLO	2,148	18	108	979	992	51	-
YUBA	984	21	54	502	387	20	-

¹ Berkeley, Long Beach and Pasadena are city health departments.

Note: City numbers are included in their respective county totals.

Source: State of California, Department of Health Services, Birth Records.

TABLE 10
NUMBER AND PERCENT OF LIVE BIRTHS
BY TRIMESTER PRENATAL CARE BEGAN AND RACE/ETHNICITY ¹ OF MOTHER
CALIFORNIA, 1998
(By Place of Residence)

RACE/ETHNICITY OF MOTHER	TOTAL		TRIMESTER PRENATAL CARE BEGAN						NO PRENATAL CARE		UNKNOWN	
			FIRST TRIMESTER		SECOND TRIMESTER		THIRD TRIMESTER					
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
TOTAL	521,265	100.0	422,866	81.1	71,750	13.8	14,285	2.7	4,365	0.8	7,999	1.5
AMERICAN INDIAN ²	2,587	100.0	1,834	70.9	513	19.8	142	5.5	55	2.1	43	1.7
ASIAN	52,718	100.0	44,601	84.6	6,124	11.6	1,021	1.9	192	0.4	780	1.5
BLACK	35,200	100.0	27,398	77.8	5,517	15.7	1,024	2.9	543	1.5	718	2.0
HISPANIC	247,796	100.0	190,523	76.9	42,183	17.0	8,718	3.5	2,422	1.0	3,950	1.6
PACIFIC ISLANDER	2,818	100.0	1,846	65.5	639	22.7	208	7.4	73	2.6	52	1.8
WHITE	176,598	100.0	153,765	87.1	16,497	9.3	3,125	1.8	1,043	0.6	2,168	1.2
OTHER	287	100.0	229	79.8	34	11.8	12	4.2	3	1.0	9	3.1
UNKNOWN	3,261	100.0	2,670	81.9	243	7.5	35	1.1	34	1.0	279	8.6

¹ American Indian, Asian, Black, Pacific Islander, White, Other and Unknown races exclude Hispanic ethnicity.
Hispanic includes any race category.

² Includes American Indian, Eskimo and Aleut.

Note: Percents are rounded independently and may not add to totals.

Source: State of California, Department of Health Services, Birth Records.

TABLE 11
LIVE BIRTHS BY TRIMESTER PRENATAL CARE BEGAN
CALIFORNIA COUNTIES AND CITY HEALTH DEPARTMENTS, 1998
(By Place of Residence)

COUNTY	TOTAL	TRIMESTER PRENATAL CARE BEGAN			NO PRENATAL CARE	UNKNOWN
		FIRST TRIMESTER	SECOND TRIMESTER	THIRD TRIMESTER		
CALIFORNIA	521,265	422,866	71,750	14,285	4,365	7,999
ALAMEDA	20,933	18,178	1,889	339	145	382
BERKELEY ¹	1,023	952	49	11	4	7
ALPINE	15	11	1	3	-	-
AMADOR	263	224	31	4	1	3
BUTTE	2,267	1,639	499	93	28	8
CALAVERAS	288	244	33	5	3	3
COLUSA	314	183	107	21	2	1
CONTRA COSTA	12,506	10,769	1,136	275	83	243
DEL NORTE	316	247	58	10	-	1
EL DORADO	1,677	1,444	189	26	8	10
FRESNO	14,363	11,723	2,070	301	138	131
GLENN	380	262	100	16	2	-
HUMBOLDT	1,457	1,157	224	55	10	11
IMPERIAL	2,500	1,840	471	124	31	34
INYO	201	143	46	10	2	-
KERN	11,521	8,850	1,793	341	40	497
KINGS	2,164	1,636	410	93	17	8
LAKE	566	390	129	36	6	5
LASSEN	294	225	54	10	4	1
LOS ANGELES	158,604	132,608	19,591	3,315	1,172	1,918
LONG BEACH ¹	8,509	6,657	1,334	301	99	118
PASADENA ¹	2,335	1,936	275	47	15	62
MADERA	2,073	1,636	326	70	31	10
MARIN	2,569	2,159	327	50	2	31
MARIPOSA	135	100	24	7	1	3
MENDOCINO	1,082	631	343	82	12	14
MERCED	3,529	2,237	955	271	23	43
MODOC	81	57	19	4	1	-
MONO	135	103	25	7	-	-
MONTEREY	6,813	5,415	1,092	237	32	37
NAPA	1,477	978	294	59	10	136
NEVADA	757	589	138	26	2	2
ORANGE	46,189	39,383	5,324	957	241	284
PLACER	2,673	2,268	313	45	8	39
PLUMAS	126	108	15	1	2	-
RIVERSIDE	23,230	17,565	4,076	976	323	290
SACRAMENTO	17,757	13,456	3,145	662	177	317
SAN BENITO	891	736	117	22	3	13
SAN BERNARDINO	28,245	21,256	5,004	1,054	357	574
SAN DIEGO	43,422	34,196	6,251	1,467	774	734
SAN FRANCISCO	8,157	7,018	873	159	89	18
SAN JOAQUIN	8,647	6,031	1,784	465	84	283
SAN LUIS OBISPO	2,373	1,933	346	67	17	10
SAN MATEO	10,142	8,745	1,086	221	68	22
SANTA BARBARA	5,764	4,633	910	173	29	19
SANTA CLARA	26,659	22,417	3,056	601	80	505
SANTA CRUZ	3,421	2,833	437	80	25	46
SHASTA	1,943	1,662	222	41	13	5
SIERRA	19	11	8	-	-	-
SISKIYOU	461	352	72	22	4	11
SOLANO	5,510	3,481	975	271	51	732
SONOMA	5,472	4,631	478	127	24	212
STANISLAUS	6,927	5,557	1,103	185	53	29
SUTTER	1,158	739	347	59	11	2
TEHAMA	651	532	96	19	2	2
TRINITY	121	85	26	7	3	-
TULARE	6,890	4,818	1,436	343	55	238
TUOLUMNE	429	362	59	6	1	1
VENTURA	11,576	10,238	1,079	173	37	49
YOLO	2,148	1,525	445	132	17	29
YUBA	984	617	293	60	11	3

¹ Berkeley, Long Beach, and Pasadena are city health departments.

Note: City numbers are included in their respective county totals.

Source: State of California, Department of Health Services, Birth Records.

SECTION III

DEATHS

Presented in **Table 12** through **Table 17** are data on deaths in 1998 for California and for each of the 58 counties and three city health departments detailed by the ten leading causes of death, age, sex, and race/ethnicity.

Ten Leading Causes of Death

Continuing a long-standing trend, the three leading causes of death in California in 1998 were heart disease, malignant neoplasms, and cerebrovascular disease, together accounting for 60.6 percent of all deaths (**Table 12**). The ten leading causes were the same in 1998 as they were in 1997.

Five of the ten leading causes of death in **Table 12** were the same rank for both California residents and residents of the United States.⁴ Four of the remaining five leading causes of death for Californians were the same as the United States but the rank ordering differed. Nephritis ranked ninth for the United States but was not among the ten leading causes in California.

In California between 1997 and 1998, six of the leading causes of death decreased in number (homicide, suicide, unintentional injuries, cerebrovascular disease, chronic liver disease and cirrhosis, and malignant neoplasms) and four increased (pneumonia and influenza, chronic obstructive pulmonary disease, diabetes, and diseases of the heart). Homicide had the largest decrease in the number of deaths, dropping 18.5 percent between 1997 and 1998. The largest increase in the number of deaths was from pneumonia and influenza which increased 8.4 percent.

Table 12 also shows death rates for each of the ten leading causes of death in 1998. Death rates for seven of ten leading causes of death had decreases and three had increases from 1997 to 1998. The largest decrease in the death rate among the ten leading causes was deaths due to homicide (-19.0 percent). The largest increase in the death rate was due to pneumonia and influenza (6.7 percent).

Death rates in 1998 were lower for Californians compared to the preliminary U.S. population for seven of the ten leading causes - heart disease,

malignant neoplasms, cerebrovascular disease, chronic obstructive pulmonary disease, unintentional injuries, diabetes, and suicide. The rates were higher in California compared to the U.S. for the three remaining causes - pneumonia and influenza, chronic liver disease and cirrhosis, and homicide.

Cause-specific death rates for California's counties are not included in this report since they should be calculated using more than a single year of data. Three-year average, cause-specific death rates are available in other Department of Health Services reports.^{6,7}

Deaths by Age and Sex

Deaths to persons aged 65 and over accounted for 73.6 percent of total deaths, 67.0 percent of the male deaths and 80.3 percent of the female deaths in 1998 (**Table 13**). The total number of deaths increased for both males and females from 1997 to 1998 (0.5 and 1.3 percent, respectively), although the percent changes varied by age group. For males between 1997 and 1998, there were decreases in the number of deaths in the age groups from Under 1 through ages 35-44 and 65-74. The largest percentage decrease was in the age group of 1-4, down 10.8 percent. The number of deaths increased for males in the age groups of 45-64 and 75 and over. For females, the largest percentage decrease between 1997 and 1998 was in the age group of 1-4 (-9.5 percent). The largest increase for females was in the age group of 5-14 (5.6 percent).

Also shown in **Table 13** are the age and sex-specific death rates among Californians in 1997 and 1998. Death rates were lower for females compared to males in each age group. Death rates for females decreased between 1997 and 1998 in ten of the eleven age groups. The largest decrease in the death rate among females was in the age group of 1-4 (-8.8 percent). Death rates increased among females in the

age group of 5-14 (3.1 percent). For males, death rates decreased in all of the eleven age groups. The largest decrease in the death rates for males was in the age group of 1-4 (-10.2 percent).

Compared to the preliminary statistics for the U.S. as a whole, the overall death rates in 1998 were lower for California's males (676.0 compared to 875.5 deaths per 100,000 males) and females (669.7 compared to 855.0 deaths per 100,000 females).⁴

Shown in **Table 14** are the number of deaths in 1998 by age group for each California county and the three city health departments. Age-specific rates by county should be calculated by using more than a single year of data and are available in other Department of Health Services reports.⁷

Deaths by Race/Ethnicity

The numbers and rates of death by race/ethnicity for Californians from 1994 through 1998 are shown in **Table 15**. Whites accounted for the largest percentage of deaths in each of the five years shown (75.1 percent in 1994 down to 73.8 percent in 1998). The number of deaths increased between 1997 and 1998 for each race/ethnic group with the exception of American Indians which decreased by 0.3 percent.

Whites also had the highest death rates among the race/ethnic groups over the five year period. American Indians experienced a decrease in their death rates between 1997 and 1998, while the death rate for the other race/ethnic groups was unchanged. The relatively low death rates among California's American Indian, Asian/Pacific Islander and Hispanic race/ethnic groups is partly due to the manner in which race/ethnicity is reported among these groups.^{9, 10, 11}

Table 16 shows the number of deaths in 1998 by race/ethnicity for each California county and the three city health departments.

Deaths by Race/Ethnicity, Age and Sex

Numbers of deaths by race/ethnicity, age and sex for California in 1998 are shown in **Table 17**.

**TABLE 12
TEN LEADING CAUSES OF DEATH
CALIFORNIA, 1997 AND 1998
(By Place of Residence)**

CAUSE OF DEATH	NINTH REVISION ICD CODE	NUMBER		PERCENT CHANGE 1997 TO 1998	RATE		PERCENT CHANGE 1997 TO 1998
		1997	1998		1997	1998	
ALL CAUSES	001-999	223,438	225,450	0.9	678.0	673.1	-0.7
DISEASES OF THE HEART	390-398, 402, 404-429	68,273	68,946	1.0	207.2	205.8	-0.7
MALIGNANT NEOPLASMS	140-208	51,818	51,186	-1.2	157.2	152.8	-2.8
CEREBROVASCULAR DISEASE	430-438	16,649	16,385	-1.6	50.5	48.9	-3.2
PNEUMONIA AND INFLUENZA	480-487	12,286	13,316	8.4	37.3	39.8	6.7
CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND ALLIED CONDITIONS	490-496	11,737	12,261	4.5	35.6	36.6	2.8
UNINTENTIONAL INJURIES	E800-949	8,762	8,620	-1.6	26.6	25.7	-3.4
DIABETES	250	5,611	5,796	3.3	17.0	17.3	1.8
CHRONIC LIVER DISEASE AND CIRRHOSIS	571	3,502	3,460	-1.2	10.6	10.3	-2.8
SUICIDE	E950-959	3,424	3,215	-6.1	10.4	9.6	-7.7
HOMICIDE	E960-969	2,780	2,265	-18.5	8.4	6.8	-19.0
ALL OTHER CAUSES	Residual	38,596	40,000	3.6			

Note: Rates are per 100,000 population.

Source: State of California, Department of Finance, Demographic Research Unit; 1997 and 1998 Population: Population Estimates for California State and Counties, Report 98 E-2, July 1, 1990 through July 1, 1998, January 1999. Data for 1998 are provisional.

State of California, Department of Health Services, Death Records.

TABLE 13
NUMBER AND RATE OF DEATHS
BY AGE AND SEX
CALIFORNIA, 1997 - 1998
(By Place of Residence)

AGE (In Years)	NUMBER						PERCENT CHANGE 1997 TO 1998		
	1997			1998			TOTAL	MALE	FEMALE
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE			
TOTAL ¹	223,438	113,026	110,412	225,450	113,639	111,811	0.9	0.5	1.3
UNDER 1	3,091	1,663	1,428	2,994	1,627	1,367	-3.1	-2.2	-4.3
1-4	647	362	285	581	323	258	-10.2	-10.8	-9.5
5-14	845	521	324	842	500	342	-0.4	-4.0	5.6
15-24	3,364	2,591	773	3,182	2,413	769	-5.4	-6.9	-0.5
25-34	5,034	3,676	1,358	4,623	3,315	1,308	-8.2	-9.8	-3.7
35-44	9,656	6,415	3,241	9,453	6,187	3,266	-2.1	-3.6	0.8
45-54	15,156	9,465	5,691	15,349	9,705	5,644	1.3	2.5	-0.8
55-64	21,973	12,949	9,024	22,304	13,290	9,014	1.5	2.6	-0.1
65-74	42,887	23,763	19,124	42,621	23,620	19,001	-0.6	-0.6	-0.6
75-84	64,116	31,796	32,320	65,285	32,472	32,813	1.8	2.1	1.5
85 AND OVER	56,584	19,759	36,825	58,118	20,102	38,016	2.7	1.7	3.2

AGE (In Years)	RATE						PERCENT CHANGE 1997 TO 1998		
	1997			1998			TOTAL	MALE	FEMALE
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE			
TOTAL ¹	678.0	684.0	671.9	672.9	676.0	669.7	-0.8	-1.2	-0.3
UNDER 1 ^a	586.7	616.9	555.0	543.4	577.5	507.8	-7.4	-6.4	-8.5
1-4	28.8	31.5	26.0	26.1	28.3	23.7	-9.4	-10.2	-8.8
5-14	16.5	19.9	12.9	15.9	18.5	13.3	-3.6	-7.0	3.1
15-24	78.5	116.1	37.6	72.7	106.2	36.6	-7.4	-8.5	-2.7
25-34	95.1	131.2	54.4	88.9	120.5	53.5	-6.5	-8.2	-1.7
35-44	174.9	228.6	119.4	168.3	216.2	118.5	-3.8	-5.4	-0.8
45-54	381.5	480.2	284.3	372.5	474.5	272.0	-2.4	-1.2	-4.3
55-64	903.2	1,094.5	722.0	878.5	1,075.4	691.8	-2.7	-1.7	-4.2
65-74	2,199.7	2,694.1	1,791.3	2,189.0	2,665.8	1,790.8	-0.5	-1.1	b
75-84	5,320.2	6,530.5	4,499.8	5,273.1	6,446.6	4,468.2	-0.9	-1.3	-0.7
85 AND OVER	14,450.7	16,443.0	13,568.6	14,153.4	15,780.9	13,421.5	-2.1	-4.0	-1.1

¹ Includes unknown age.

^a Death rates for "Under 1" are calculated using population data and differ from the infant death rates shown in Table 2 which are calculated using the number of live births.

^b Less than 0.05 percent.

Note: Rates are per 100,000 population.

Rates in this report may differ from rates in previously published Advance Reports since rates were revised to reflect the most current population released by the Department of Finance.

Source: State of California, Department of Finance; 1997 Population: Population Estimates by Age, Race/Ethnicity and Sex, June 1999. 1998 Population: Population Projections by Age, Race/Ethnicity and Sex, December 1998. State of California, Department of Health Services, Death Records.

TABLE 14
DEATHS BY AGE
CALIFORNIA COUNTIES AND CITY HEALTH DEPARTMENTS, 1998
(By Place of Residence)

COUNTY	TOTAL	AGE OF DECEDENT (In Years)											UNKNOWN
		UNDER 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 AND OVER	
CALIFORNIA	225,450	2,994	581	842	3,182	4,623	9,453	15,349	22,304	42,621	65,285	58,118	98
ALAMEDA	9,801	106	18	17	122	205	424	772	925	1,825	2,814	2,570	3
BERKELEY ¹	674	4	1	-	7	15	25	58	61	99	195	209	-
ALPINE	8	-	-	-	-	-	1	1	1	-	1	4	-
AMADOR	333	1	1	1	2	8	7	24	32	65	104	88	-
BUTTE	2,133	18	3	5	26	33	68	124	185	375	676	620	-
CALAVERAS	382	1	-	-	3	6	11	24	38	94	115	90	-
COLUSA	146	1	-	3	2	4	2	12	22	23	45	32	-
CONTRA COSTA	6,659	74	15	27	67	127	272	449	656	1,227	1,933	1,810	2
DEL NORTE	272	1	-	1	6	6	15	19	26	70	74	54	-
EL DORADO	1,078	6	3	3	10	12	48	75	113	233	322	252	1
FRESNO	5,422	93	22	35	114	131	252	323	528	1,031	1,512	1,379	2
GLENN	220	3	-	2	8	7	7	17	20	37	65	54	-
HUMBOLDT	1,177	13	4	2	20	20	53	96	115	216	341	296	1
IMPERIAL	853	18	4	5	25	31	37	55	98	201	206	135	38
INYO	208	1	-	-	-	1	6	11	17	37	67	68	-
KERN	4,627	77	13	29	94	113	246	320	532	926	1,278	997	2
KINGS	746	17	4	1	15	26	39	62	67	161	198	156	-
LAKE	800	4	-	-	4	9	35	41	91	169	266	181	-
LASSEN	213	1	-	-	3	6	10	23	25	46	54	45	-
LOS ANGELES	58,923	936	148	224	957	1,420	2,637	4,346	6,234	11,070	16,170	14,773	8
LONG BEACH ¹	3,290	60	9	9	40	68	148	282	316	558	923	876	1
PASADENA ¹	1,175	15	3	6	12	19	37	79	101	199	328	376	-
MADERA	815	13	1	4	29	13	38	54	69	170	242	182	-
MARIN	1,854	6	1	-	12	15	60	99	146	316	581	615	3
MARIPOSA	176	2	-	-	3	-	8	14	17	53	49	29	1
MENDOCINO	809	6	1	4	11	14	33	59	78	154	243	206	-
MERCED	1,355	22	8	10	34	26	54	98	139	281	364	319	-
MODOC	120	1	-	1	-	1	2	3	9	27	35	41	-
MONO	38	-	-	1	-	1	4	2	7	3	16	4	-
MONTEREY	2,290	42	3	5	42	43	113	142	211	438	681	570	-
NAPA	1,279	5	2	1	9	8	27	61	101	214	411	440	-
NEVADA	855	6	2	3	6	7	24	47	60	150	285	265	-
ORANGE	16,133	205	44	54	180	296	593	933	1,524	2,937	4,829	4,538	-
PLACER	1,652	11	2	4	12	17	64	90	148	307	513	484	-
PLUMAS	208	4	-	-	1	1	9	15	21	42	67	48	-
RIVERSIDE	11,766	175	42	48	154	237	464	737	1,135	2,346	3,584	2,838	6
SACRAMENTO	8,780	109	25	37	122	166	383	639	927	1,742	2,587	2,043	-
SAN BENITO	273	4	1	-	10	9	7	16	24	49	86	67	-
SAN BERNARDINO	10,638	213	48	65	209	264	531	798	1,168	2,096	2,903	2,342	1
SAN DIEGO	18,767	224	42	57	254	331	714	1,164	1,643	3,418	5,948	4,956	16
SAN FRANCISCO	6,649	41	3	7	53	141	365	529	571	1,154	1,820	1,962	3
SAN JOAQUIN	4,178	52	13	22	66	89	174	285	427	843	1,207	1,000	-
SAN LUIS OBISPO	1,992	14	2	4	13	18	58	97	147	379	653	607	-
SAN MATEO	4,988	44	10	12	37	72	170	295	458	953	1,517	1,419	1
SANTA BARBARA	2,872	33	8	12	25	40	96	173	234	508	807	936	-
SANTA CLARA	8,977	102	27	37	98	192	341	607	936	1,725	2,534	2,377	1
SANTA CRUZ	1,670	20	5	6	22	34	65	102	149	253	452	561	1
SHASTA	1,713	9	2	10	19	24	59	100	152	359	543	435	1
SIERRA	35	-	-	-	-	-	1	4	2	9	11	8	-
SISKIYOU	451	1	-	3	7	4	13	28	65	102	109	119	-
SOLANO	2,373	36	7	10	32	58	114	197	266	496	657	499	1
SONOMA	3,690	30	7	16	50	58	139	243	309	586	1,140	1,111	1
STANISLAUS	3,386	47	11	16	46	65	147	224	362	670	956	840	2
SUTTER	620	9	1	-	6	17	23	38	70	134	185	137	-
TEHAMA	584	3	2	1	7	7	18	33	61	120	195	137	-
TRINITY	157	2	-	-	4	2	7	11	20	27	52	32	-
TULARE	2,555	47	13	11	56	63	117	186	261	500	713	586	2
TUOLUMNE	583	2	-	-	1	7	13	35	72	118	202	133	-
VENTURA	4,596	65	10	18	54	92	171	295	405	827	1,395	1,263	1
YOLO	1,043	7	2	5	18	13	37	68	108	199	315	271	-
YUBA	529	11	1	3	2	13	27	34	77	110	157	94	-

¹ Berkeley, Long Beach and Pasadena are city health departments.

Note: City numbers are included in their respective county totals.

Source: State of California, Department of Health Services, Death Records.

**TABLE 15
DEATHS AND DEATH RATES
BY RACE/ETHNICITY ¹
CALIFORNIA, 1994-1998
(By Place of Residence)**

RACE/ETHNICITY OF DECEDENT	NUMBER OF DEATHS					PERCENT CHANGE 1997 TO 1998
	1994	1995	1996	1997	1998	
TOTAL	222,854	222,626	222,308	223,438	225,450	0.9
AMERICAN INDIAN ²	667	749	740	800	798	-0.3
ASIAN/PACIFIC ISLANDER	11,685	12,037	12,475	13,144	13,591	3.4
BLACK	18,279	18,011	17,925	17,480	17,607	0.7
HISPANIC	24,903	25,901	26,128	26,470	26,979	1.9
WHITE ³	167,320	165,928	165,040	165,544	166,475	0.6

RACE/ETHNICITY OF DECEDENT	DEATH RATES ⁴					PERCENT CHANGE 1997 TO 1998
	1994	1995	1996	1997	1998	
TOTAL	7.0	6.9	6.9	6.8	6.7	-1.5
AMERICAN INDIAN ²	3.5 ^a	3.9 ^a	3.8 ^a	4.1 ^a	4.0 ^a	-2.4
ASIAN/PACIFIC ISLANDER	3.6 ^a	3.6 ^a	3.6 ^a	3.7 ^a	3.7 ^a	-
BLACK	8.2	8.0	7.9	7.6	7.6	-
HISPANIC	2.8 ^a	2.8 ^a	2.8 ^a	2.7 ^a	2.7 ^a	-
WHITE ³	9.7	9.7	9.6	9.6	9.6	-

¹ Asian/Pacific Islander, Black, Native American and White exclude Hispanic ethnicity. Hispanic includes any race category.

² Includes American Indian, Eskimo and Aleut.

³ Includes White, Other and Unknown.

⁴ Rates are per 1,000 population.

^a Reliability of death rates for Asian/Pacific Islanders, American Indians and Hispanics is questionable due to incorrect reporting of race/ethnicity among these groups.

- Rates unchanged from prior year.

Note: Population data are available for only these five race/ethnic groups.

Rates in this report may differ from rates in previously published Advance Reports since rates were revised to reflect the most current population released by the Department of Finance.

Source: State of California, Department of Finance; 1994-1996 Population: 1970-1996 Race/Ethnic Population Estimates by County with Age and Sex detail, January 1998. 1997 Population: Population Estimates by Age, Race/Ethnicity and Sex, June 1999. 1998 Population: Population Projections by Age, Race/Ethnicity and Sex, December 1998.

State of California, Department of Health Services, Death Records.

TABLE 16
DEATHS BY RACE/ETHNICITY¹
CALIFORNIA COUNTIES AND CITY HEALTH DEPARTMENTS, 1998
(By Place of Residence)

COUNTY	TOTAL	RACE/ETHNICITY OF DECEDENT							
		AMERICAN INDIAN ²	ASIAN	BLACK	HISPANIC	PACIFIC ISLANDER	WHITE	OTHER	UNKNOWN
CALIFORNIA	225,450	798	13,114	17,607	26,979	477	166,363	11	101
ALAMEDA	9,801	20	914	2,076	660	41	6,084	1	5
BERKELEY ³	674	1	52	213	17	-	391	-	-
ALPINE	8	-	-	-	-	-	8	-	-
AMADOR	333	4	-	1	6	-	321	-	1
BUTTE	2,133	19	15	17	48	-	2,034	-	-
CALAVERAS	382	3	2	1	8	-	368	-	-
COLUSA	146	2	1	-	18	-	125	-	-
CONTRA COSTA	6,659	15	336	724	417	15	5,150	1	1
DEL NORTE	272	8	1	-	8	-	255	-	-
EL DORADO	1,078	4	10	8	30	-	1,025	-	1
FRESNO	5,422	20	262	355	1,047	1	3,736	-	1
GLENN	220	1	2	1	14	-	202	-	-
HUMBOLDT	1,177	45	9	6	21	1	1,095	-	-
IMPERIAL	853	9	16	27	420	-	379	-	2
INYO	208	12	1	-	8	-	187	-	-
KERN	4,627	10	97	284	662	1	3,572	-	1
KINGS	746	8	14	48	163	3	510	-	-
LAKE	800	10	3	22	23	-	742	-	-
LASSEN	213	5	-	2	2	-	204	-	-
LOS ANGELES	58,923	94	4,332	8,239	10,670	115	35,435	4	34
LONG BEACH ³	3,290	5	202	386	266	26	2,396	1	8
PASADENA ³	1,175	-	56	201	122	-	796	-	-
MADERA	815	6	7	34	140	1	627	-	-
MARIN	1,854	2	26	32	38	-	1,755	-	1
MARIPOSA	176	3	-	-	2	-	170	-	1
MENDOCINO	809	24	5	2	24	1	752	-	1
MERCED	1,355	3	55	78	243	-	976	-	-
MODOC	120	1	-	-	4	-	115	-	-
MONO	38	2	-	-	-	-	36	-	-
MONTEREY	2,290	9	165	100	323	10	1,683	-	-
NAPA	1,279	3	13	8	51	5	1,199	-	-
NEVADA	855	1	4	1	10	-	839	-	-
ORANGE	16,133	18	975	182	1,533	23	13,397	-	5
PLACER	1,652	10	22	9	65	2	1,544	-	-
PLUMAS	208	7	-	2	2	-	197	-	-
RIVERSIDE	11,766	52	181	586	1,333	20	9,585	-	9
SACRAMENTO	8,780	39	564	786	480	21	6,889	-	1
SAN BENITO	273	-	6	-	65	1	201	-	-
SAN BERNARDINO	10,638	35	228	814	1,699	19	7,840	-	3
SAN DIEGO	18,767	80	765	805	1,781	59	15,257	3	17
SAN FRANCISCO	6,649	13	1,455	926	485	30	3,736	-	4
SAN JOAQUIN	4,178	21	317	287	509	10	3,034	-	-
SAN LUIS OBISPO	1,992	3	20	28	82	1	1,856	1	1
SAN MATEO	4,988	6	490	237	349	48	3,857	1	-
SANTA BARBARA	2,872	4	65	59	342	3	2,398	-	1
SANTA CLARA	8,977	24	1,040	208	1,057	15	6,632	-	1
SANTA CRUZ	1,670	5	53	12	124	2	1,474	-	-
SHASTA	1,713	27	12	8	27	-	1,639	-	-
SIERRA	35	-	-	-	-	-	35	-	-
SISKIYOU	451	15	3	8	6	-	419	-	-
SOLANO	2,373	15	207	335	136	12	1,666	-	2
SONOMA	3,690	22	48	43	144	5	3,427	-	1
STANISLAUS	3,386	15	83	61	310	1	2,915	-	1
SUTTER	620	2	40	4	46	-	528	-	-
TEHAMA	584	2	-	2	17	-	562	-	1
TRINITY	157	3	-	-	4	-	150	-	-
TULARE	2,555	14	63	34	525	2	1,915	-	2
TUOLUMNE	583	5	2	-	9	-	567	-	-
VENTURA	4,596	6	133	69	642	7	3,737	-	2
YOLO	1,043	3	29	19	130	1	860	-	1
YUBA	529	9	23	17	17	1	462	-	-

¹ Asian, Black, Native American, Pacific Islander, White, Other and Unknown races exclude Hispanic ethnicity. Hispanic includes any race category.

² Includes American Indian, Eskimo and Aleut.

³ Berkeley, Long Beach and Pasadena are city health departments.

Note: City numbers are included in their respective county totals.

Source: State of California, Department of Health Services, Death Records.

TABLE 17
DEATHS BY SEX, RACE/ETHNICITY ¹ AND AGE
CALIFORNIA, 1998
(By Place of Residence)

SEX AND RACE/ETHNICITY	ALL AGES	AGE IN YEARS											UNKNOWN
		UNDER 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 AND OVER	
TOTAL	225,450	2,994	581	842	3,182	4,623	9,453	15,349	22,304	42,621	65,285	58,118	98
AMERICAN INDIAN ²	798	21	4	4	32	42	67	106	123	155	158	86	-
ASIAN	13,114	211	43	73	247	288	527	1,021	1,476	2,755	3,733	2,737	3
BLACK	17,607	481	70	121	420	637	1,321	2,053	2,620	3,512	3,841	2,528	3
HISPANIC	26,979	1,351	270	336	1,313	1,534	2,113	2,475	3,225	5,207	5,160	3,965	30
PACIFIC ISLANDER	477	18	2	8	12	25	26	72	103	109	76	26	-
WHITE	166,363	906	192	300	1,157	2,093	5,392	9,616	14,741	30,865	52,297	48,766	38
OTHER	11	-	-	-	1	1	2	-	2	1	3	1	-
UNKNOWN	101	6	-	-	-	3	5	6	14	17	17	9	24
MALE	113,639	1,627	323	500	2,413	3,315	6,187	9,705	13,290	23,620	32,472	20,102	85
AMERICAN INDIAN ²	434	10	3	2	22	32	39	71	80	80	67	28	-
ASIAN	7,305	100	16	44	173	199	328	629	874	1,558	2,049	1,332	3
BLACK	9,267	262	38	82	327	431	808	1,247	1,539	1,923	1,772	836	2
HISPANIC	15,324	723	148	198	1,063	1,183	1,485	1,621	1,925	2,938	2,510	1,501	29
PACIFIC ISLANDER	280	11	1	6	9	16	18	44	64	59	41	11	-
WHITE	80,962	517	117	168	818	1,451	3,506	6,087	8,798	17,052	26,023	16,391	34
OTHER	4	-	-	-	1	1	-	-	1	-	1	-	-
UNKNOWN	63	4	-	-	-	2	3	6	9	10	9	3	17
FEMALE	111,811	1,367	258	342	769	1,308	3,266	5,644	9,014	19,001	32,813	38,016	13
AMERICAN INDIAN ²	364	11	1	2	10	10	28	35	43	75	91	58	-
ASIAN	5,809	111	27	29	74	89	199	392	602	1,197	1,684	1,405	-
BLACK	8,340	219	32	39	93	206	513	806	1,081	1,589	2,069	1,692	1
HISPANIC	11,655	628	122	138	250	351	628	854	1,300	2,269	2,650	2,464	1
PACIFIC ISLANDER	197	7	1	2	3	9	8	28	39	50	35	15	-
WHITE	85,401	389	75	132	339	642	1,886	3,529	5,943	13,813	26,274	32,375	4
OTHER	7	-	-	-	-	-	2	-	1	1	2	1	-
UNKNOWN	38	2	-	-	-	1	2	-	5	7	8	6	7

¹ American Indian, Asian, Black, Pacific Islander, White, Other and Unknown races exclude Hispanic ethnicity. Hispanic includes any race category.

² Includes American Indian, Eskimo and Aleut.

Source: State of California, Department of Health Services, Death Records.

APPENDIX A
POPULATION PROJECTIONS BY AGE, RACE/ETHNICITY AND SEX
CALIFORNIA, 1998

RACE/ETHNICITY AND SEX	TOTAL	AGE (In Years)										
		UNDER 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85 AND OVER
TOTAL	33,506,406 ^a	550,947	2,229,538	5,282,789	4,373,982	5,197,303	5,617,073	4,120,181	2,538,804	1,947,086	1,238,074	410,629
MALE	16,810,163	281,755	1,140,456	2,704,271	2,272,297	2,751,105	2,862,096	2,045,268	1,235,786	886,040	503,707	127,382
FEMALE	16,696,243	269,192	1,089,082	2,578,518	2,101,685	2,446,198	2,754,977	2,074,913	1,303,018	1,061,046	734,367	283,247
AMERICAN INDIAN ¹	199,747	2,704	10,776	27,849	29,428	30,687	34,281	28,285	17,485	10,427	5,578	2,247
MALE	97,890	1,383	5,396	14,252	15,191	15,772	16,394	13,292	8,377	4,769	2,277	787
FEMALE	101,857	1,321	5,380	13,597	14,237	14,915	17,887	14,993	9,108	5,658	3,301	1,460
ASIAN/PACIFIC ISLANDER	3,716,953	61,419	245,115	586,284	535,049	592,898	633,604	468,924	267,784	192,141	103,215	30,520
MALE	1,830,372	31,442	126,200	300,678	274,592	299,440	306,150	222,202	127,065	83,935	45,073	13,595
FEMALE	1,886,581	29,977	118,915	285,606	260,457	293,458	327,454	246,722	140,719	108,206	58,142	16,925
BLACK	2,309,152	37,800	154,807	406,196	348,911	373,822	384,318	263,770	160,600	103,589	57,742	17,597
MALE	1,140,242	19,338	78,713	205,648	184,486	194,662	186,863	124,020	74,971	44,721	21,647	5,173
FEMALE	1,168,910	18,462	76,094	200,548	164,425	179,160	197,455	139,750	85,629	58,868	36,095	12,424
HISPANIC	10,022,551	260,318	1,038,698	2,067,406	1,508,352	1,829,028	1,511,127	853,827	457,988	301,747	142,013	52,047
MALE	5,192,410	133,045	529,865	1,055,483	779,987	1,026,089	801,005	432,421	221,673	137,112	57,843	17,887
FEMALE	4,830,141	127,273	508,833	1,011,923	728,365	802,939	710,122	421,406	236,315	164,635	84,170	34,160
WHITE ²	17,258,003	188,706	780,142	2,195,054	1,952,242	2,370,868	3,053,743	2,505,375	1,634,947	1,339,182	929,526	308,218
MALE	8,549,249	96,547	400,282	1,128,210	1,018,041	1,215,142	1,551,684	1,253,333	803,700	615,503	376,867	89,940
FEMALE	8,708,754	92,159	379,860	1,066,844	934,201	1,155,726	1,502,059	1,252,042	831,247	723,679	552,659	218,278

¹ Includes American Indian, Eskimo and Aleut.

² Includes White, Other and Unknown.

^a Total does not match total on Tables 1 and 2 due to independent rounding by race, age and sex.

Note: American Indian, Asian/Pacific Islander, Black and White exclude Hispanic ethnicity. Hispanic includes any race category.

Source: State of California, Department of Finance; 1998 Population: Population Projections by Age, Race/Ethnicity and Sex, December 1998.

APPENDIX B

TECHNICAL NOTES

LIMITATIONS OF DATA

Limitations of the data must be recognized by users to avoid invalid interpretations. For vital statistics data, these are related to the difficulties in reporting and classifying information and to some under-registration of events. It is especially necessary to exercise caution when evaluating vital statistics trend data, because medical concepts, legal codes, definitions concerning vital statistics events, estimates of the population, race coding, and methods of assigning causes of death change over time.

Variability of Rates

Vital statistics rates are sensitive to variations in the size of both the numerator (the number of vital events that occurred) and the denominator (the estimated population at risk). For example in small counties, a variation of only a few cases in the numerator can cause a relatively large shift in the rate while, in a large county, it may result in no change at all. Likewise, a minor revision in the estimate of the population in a small county may cause a relative major change in a vital event rate in that county.

Sampling Error and Vital Statistics

The number of births and deaths reported for an area in California represents complete counts; as such, they are not subject to sampling error, although they are subject to errors in the registration process. However, when the figures are used for analytic purposes, such as comparison of rates over a time period or for different areas, the number of events that actually occurred may be considered as one of a larger series of possible results that could have arisen under the same circumstances.¹² The probable range of values may be estimated from the actual figures according to certain statistical assumptions. The problem of random variation of rates is well presented in the Technical Appendix to The Vital

Statistics of the United States, 1978, Volume I, Natality¹³ and is described as follows:

“In general, distributions of vital events may be assumed to follow the binomial distribution. Estimates of standard error and tests of significance under this assumption are described in most standard statistics texts. When the number of events is large, the standard error, expressed as a percent or a number or rate, is usually small.

When the number is small (perhaps less than 100) and the probability of such an event is small, considerable caution must be observed in interpreting the conditions described by the figures. Such events of rare nature may be assumed to follow a Poisson probability distribution.”

Race/Ethnicity

The following race/ethnic categories and their definitions were used in this report:

American Indian – includes American Indian, Eskimo, and Aleut.

Asian – includes Chinese, Japanese, Korean, Vietnamese, Cambodian, Thai, Laotian, Asian Indian, Filipino, Asian Unspecified, and Asian Specified.

Black – includes Black.

Hispanic – includes Mexican/Mexican American/Chicano, Puerto Rican, Cuban, Central/South American, other Spanish/ Hispanic (born outside U.S.), other Spanish/Hispanic (born in the U.S.).

Pacific Islander – includes Hawaiian, Guamanian, Samoan, and other Pacific Islander.

White – includes White.

Other – includes Other Specified.

Unknown – includes Refused to State and Unknown.

For purposes of presenting race/ethnic groups that are mutually exclusive, all persons who indicated they were of Spanish origin were included in the “Hispanic” group regardless of their race. All remaining non-Hispanic persons were included in their respective race group, i.e. American Indian, Asian, Black, Pacific Islander, White, and Other.

Population

The Department of Finance (DOF) prepares the population data used as denominators for calculating rates in this report. In January 1998 DOF released revised population estimates for the years 1970 through 1996. In 1998 DOF also released population projections for the years 1997 through 2040 and in June 1999 population estimates were released for 1997. Rates in this report were calculated using the population estimates for the years 1980 through 1997. Since estimates were not available for 1998, projections were used. Refer to the footnotes on each table for the source of population estimates and projections.

In addition, the population used to calculate the crude rates in **Table 2A** differs from the population used to calculate the crude rates in **Table 2**. Caution should be exercised when comparing the crude rates among the three city health departments with rates among the 58 counties.

APPENDIX C

DEFINITIONS

The following is a Glossary of technical terms used in this report:

Place of occurrence: The place where the event occurred (regardless of place of residence).

Place of residence: The place where a person lives or maintains legal residency. For live births and fetal deaths, the mother's residence is used.

Births

Live Birth: "Live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or placenta is attached; each product of such a birth is considered live born." This definition was promulgated by the World Health Organization in 1950 and is set forth in the California Administrative Code, Title 17, Chapter 1, Article 3.

Low Birthweight: A live birth or fetal death weighing less than 2,500 grams (5 pounds, 8 ounces).

Deaths

Fetal death: "Fetal death is death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy; the death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles." This definition was promulgated by the World Health Organization in 1950 and is set forth in the California Administrative code, Title 17, Chapter 1, Article 3. If fetus is 20 weeks or more gestational age, the death must be registered with the local registrar.

Infant death: A death occurring during the first year of life.

APPENDIX D

RATES AND RATIO

Birth Rates

$$\text{Age-specific birth rate} = \frac{\text{number of live births to women in specific age group}}{\text{estimated female population in that age group}} \times 1,000$$

$$\text{General fertility rate} = \frac{\text{number of live births}}{\text{estimated female population 15-44 years old}} \times 1,000$$

$$\text{Live birth rate (crude birth rate)} = \frac{\text{number of live births}}{\text{estimated total population}} \times 1,000$$

Death Rates and Ratio

$$\text{Age-specific death rate} = \frac{\text{number of deaths in specific age group}}{\text{estimated population in that age group}} \times 100,000$$

$$\text{Death rate (crude death rate)} = \frac{\text{number of deaths}}{\text{estimated total population}} \times 1,000$$

$$\text{Death rate from a specific cause} = \frac{\text{number of deaths from a specific cause}}{\text{estimated total population}} \times 100,000$$

$$\text{Fetal death ratio} = \frac{\text{number of reportable fetal deaths}}{\text{total number of live births}} \times 1,000$$

$$\text{Infant death rate} = \frac{\text{number of deaths under 1 year of age}}{\text{total number of live births}} \times 1,000$$

APPENDIX E

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